

THE IDENTITY OF PSORALEA MULTIJUGA ELL.
(LEGUMINOSAE).

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It was with a sense of guilt that I noted in Barneby's most impressive treatment of the North American species of *Astragalus* (Mem. N.Y. Bot. Gard. 13: 544-545. 1964.) that the identity of *Psoralea multijuga* Elliott was still in question nine years after I had examined the type.

Vail (Bull. Torrey Club 21: 118. 1894) reported that Elliott's type had been examined by both Drs. Britton and Small and had "proved to be *Astragalus glaber* Michx." *Astragalus glaber* Michx. is a later homonym of an Old World species named by Lamarck in 1783; the southeastern species is now called *Astragalus michauxii* (Kuntze) F. J. Hermann. Small (Man. Se. Fl. 710. 1933.) listed *P. multijuga* Ell. in the synonymy of *Tium michauxii* (Kuntze) Rydb.

Weatherby (Rhodora 44: 249. 1942.) in a paper concerned with the types in Elliott's Herbarium felt that in spite of its resemblance to the species now known as *A. michauxii*, its inflorescence appeared quite different. Weatherby concluded that he "did not recognize it; [and that]: it should have further investigation."

Barneby (op. cit. p. 545.) felt that "Elliott's description of its 'trailing stem' and especially its monospermous germ are impossible to reconcile with the erect growth habit and 30-40 ovules" of *A. michauxii*. He pointed out that since there was an *Astragalus multijugus* DC. dating from 1825, there was little likelihood that Elliott's name could affect the nomenclature of this or any other *Astragalus*. In passing it might be noted that Elliott did not describe *P. multijuga* as possessing a "trailing" stem but one "apparently 1-2 feet high" and, lacking fruit, he merely surmised from the appearance of the young "germ" [=ovary] that it

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would be 1-seeded. Elliott apparently had no first hand familiarity with any of the included species of *Astragalus* with the possible exception of *A. villosus*. Even *A. canadensis* was described as prostrate.

I had the privilege of examining the type specimen of *P. multijuga* in the Charleston Museum (CHARL) in August 1957. The specimen there bears a manuscript name, as reported by Weatherby, with the genus questioned. It also bears the name of the Mr. Gourdine who had collected it "some years ago" in the vicinity of Abbeville, South Carolina. Both the collector and the locality were indicated by Elliott in his Sketch.

Elliott's *P. multijuga* is not *Astragalus michauxii* (= *A. glaber* Michx.) but *A. canadensis* L. The specimen is the top of a young plant about 2 dm long with two flowering racemes and two more with flowers in bud. The calyx lobes of the type are about 3.5-3.7 mm long and about twice as long as the moderately appressed villous calyx tube (c. 1.5-1.7 (2.2) mm long). The leaflets are sparsely strigillose beneath and the stipules are about 6.5 mm long. Elliott reported that "under the microscope" the leaves beneath were "apparently covered with minute black glands." The leaves do appear minutely mottled but the spots are definitely not psoraloid glands but appear to be cellular occlusions which caused some puckering upon drying. The specimen hence seems to fall within the range of variation allowed in *A. canadensis* L. or *A. canadensis* var. *carolinianus* (L.) M. E. Jones. However, as previously reported (N.C. Agri. Expt. Sta. Tech. Bull. 151. p. 225. 1963.), the proposed varieties of this species in eastern North America lack discrete geographical ranges and the variation of morphological characters upon which the varieties were based seems almost continuous. Barneby (op. cit. p. 604.) stated that there "is evidently some correlation between certain types of variation and dispersal patterns, but no reliable method of separating named geographic races . . .".

Elliott (Sk. Bot. S.C. & Ga. 2: 225-226. 1822.) included five species of *Astragalus* (*A. carolinianus*, *A. canadensis*, *A. glaber*, *A. obcordatus* and *A. villosa* as a species of

Phaca). There are specimens of at least the first four species in Elliott's herbarium but it is not surprising that he failed to identify the imperfect type specimen of *P. multijuga* with the two scrappy specimens from Muhlenberg now in his herbarium representing *A. carolinianus* and *A. canadensis*.

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